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EXAMINER

BOCKELMAN, MARK

ART UNIT PAPER NUMBER

3762

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/786,252

Applicant(s)

SORMANN ET AL.

Examiner

Mark W. Bockelman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-35 is/are pending in the application.
- 4a) Of the above claim(s) 14-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, 26-32 and 35 is/are rejected.
- 7) ☒ Claim(s) 33 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1-31-05, 4-8-05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5, 7-9, 11-13, 32 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Fujii et al USPN 5,411,535. Fujii teaches and external device 100 and an internal device 150 which may communicate in a frequency range of tens of MHz to several GHz (i.e at least 2 MHz). The external device provides power to the electrodes 125 via a radiation to power voltage converter (column 6 lines 45-53). The implanted device may also receive cardio-information as well as collect data and transmit it back to the external device (column 8 lines 13-31). Applicant's intended use of "external" power transmitting portion is given no patentable weight absent any distinguishing structure. The main body 100 of Fujii is capable of being placed outside of a body which is all that is required by the claims.

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Claims 1-5, 7-9, 11-13, 32 and 35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Markowitz et al USPN 5,626,630 (alone or in view of Fuji et al USPN 5,411,535) Markowitz et al. teach a telemetry system that uses transmission frequencies in the .5Ghz – 5Ghz frequency range using antennas that are considered as microstrip.. Each implanted device is disclosed as a pacemaker with body sensing functions that are retrieved during implant interrogation. Pacemakers provide current pulse to the cardiac muscle. The radiation involved in the Sun for communicating information, would have a power parameter value associated with it. Since applicant does not specify how the power is utilized, the Markowitz et al reference still reads upon the claims as written as a first interpretation. As a second interpretation, the Markowitz reference teaches the transfer of power by the repeater to recharge a rechargeable battery within the implanted device (column 9 lines 30-48) by transferring power from the interrogation signal to the implanted device. Markowitz et al. note that the power level in the repeater must be increased which one of ordinary skill in the art would deem inherent or obvious that the statement would entail a power source for boosting the energy. The repeater would thus be considered a primary controller. As a third interpretation, the repeater and the tower could be considered a multi- element primary controller and since applicant's have place no limitations in the claims as to what the power source may or may not include, would read thereupon.

Fuji is cited as showing greater detail as to transmission and recovery of power to operate the implantable device. To have used the Fuji et al circuitry for transmitting

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and receiving operating power in the Markowitz device per the discussion in column 9 lines 31-47 of Markowitz would have been an obvious solution to the result desired.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-13, 26-31 are rejected under 35 U.S.C. 103(a) as obvious over Cimochofski et al USPN 5,967,986 in view of Markowitz et al USPN 5,626,630 or Sun et al USPN 5,861,019 or Fuji et al USPN 5,411,535 .

Cimochofski teaches a primary controller (101-fig12, 90-90" figs 7-10) an antenna based stent device 30 – 30" that receives power and transducer selection data from the primary controller to select various transducers to monitor various characteristics such as flow and transmit the results back to the primary controller (thus possessing a receiver) and monitoring console 101. Cimochofski states that for deep implants up to 100 MHz carrier frequencies may be used and for shallow implants much higher frequencies are used. Cimochofski suggests that up to 1 Ghz may be used with no anticipated problems (see column 12 lines 23-45). Although Cimochofski teaches the use of coil to coil inductive coupling applicant excludes such from the claims and thus

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differs in his type of antenna. Markowitz and Sun et al teach microstrip antennas for operating within the .5-5 Ghz transmission frequency range. To have used the well known alternative antenna transmission systems taught in the Markowitz and Sun references to achieve data/power transmission would have been an obvious substitution of equipment in view of the teachings of Fuji, Sun and Markowitz. Each antenna system is omnidirectional.

In regard to claim 8, the examiner considers the turning on an off of the transducers via the MUX switch as called for by the controller to be the result of the generation of pulses of current by the antenna based device. The Doppler embodiment requires pulsed transducer excitation as well.

Although it is not clear as to what applicant means by spring-based stent, the Cimochoowski et al device is made of conventional stent materials which may be expanded and would have some degree of compressability/resiliency. In the event that applicant considers the stent to act as a spring, the examiner takes official notice that many such stents are old and well known and that a reading of Cimochoowski would convey to the reader that any of these types of stents may be used.

Figure 8 Column 13 lines 49+ teach an embodiment using and intermediate set of coils (repeater device) as called for in applicant's claim 31.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cimochoowski et al. USPN 5,967,986 in view of Markowitz et al USPN 5,626,630 or Sun et al USPN 5,861,019 as applied to claims 1-5, 7-13 and 26-31 and further in view of Mehra USPN

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5,170,802. To have used the stent device of Cimochoowski et al for pacing and thus stimulating muscle as recited in applicant's claim 32 would have been obvious in view of Mehra USPN 5,170,802 which teaches the use of stents for pacing.

### ***Allowable Subject Matter***

Claims 33-34 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

Applicant's arguments filed 4-28-2005 have been fully considered but they are not persuasive. The examiner disagrees with applicant as to whether the intended use statements of "external" provide a distinguishing feature, the examiner concludes that it does not. Markowitz (column 9 lines 31-47) clearly envisions a power transmission operating system that would inherently include a conversion means, with Fuji et al demonstrating such an arrangement. The examiner also notes that applicant discusses a repeater type device in his own specification similar to that of Markowitz.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark W Bockelman whose telephone number is (703)-308-2112. The examiner can normally be reached on Monday - Thursday 10-8:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached at (571) 272 -6996. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MWB

July 11, 2005

  
MARK BOCKELMAN  
PATENT EXAMINER